POLYAKOV, P.V., inzh.; KARAKAY, P.A., inzh.; SERGIYENKO, N.M.

Automatic regulator for the feeding of a screw press. Masl.-zhir. prom. 26 no.10:32-34 O '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Polyakov).
2. Krasnodarskiy masloshirovoy kombinat (for Karakay, Sergiyenko).
(Power presses) (Automatic control)

CHERNYSHEV, A.P.; KONDRATENKO, I.V.; POLYAKOV, P.V.; SOLOV'YEVA, P.N.;
ANIGIN, A.F.

Cableless circuit for the automation of belt and single-chain scraper conveyers in a coal mine. Prom.energ. 16 no.6:10-11 Je '61. (MIRA 15:1)
(Conveying machinery) (Automatic control)

POLYAKOV, P.V.

Electrodeposition of silver from fused chlorides. Izv. vys. ucheb. zav.; tsvet. met. 8 no.1:80-85 '65. (MIRA 18:6)

1. Leningradskiy politekhnicheskiy institut, kafedra elektropirometallurgii tsvetnykh metallov.

L 23836-65 EWT(m)/EPF(n)-2/EPR/T/EWP(t)/EWP(b) Ps-4/Pu-4 IJP(c) JD/JG
ACCESSION NR: AT4045608 S/2563/64/000/239/0193/0207

AUTHOR: Baymakov, Yu. V.; Polyakov, P. V.

TITLE: Crystallization of metals on a cathode during the electrolysis of molten salts

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 239, 1964. Elektrometallurgiya tsvetny*kh metallov (Electrometallurgy of nonferrous metals), 193-207

27

TOPIC TAGS: refractory metal, electrolytic coating, molten salt, platinum cathode, crystallization nuclei, surface activity

ABSTRACT: The development of a method of protective electrolytic coating without aqueous solution and the electrolytic production of Ti, Zn, Be and of other refractory metals, initialed the investigation of the primary stage of crystallization which is marked by the formation of nuclei. All tests were conducted in nitrate and chloride melts. A 99.99% Ag wire served as an anode. The platinum cathode was pickled in concentrated HNO_3, washed and dried. The kinetics of the nuclei formation on the cathode were determined from the concentration of the

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L 23836-65
ACCESSION NR: AT4045608

reducible cations, the temperature of the fusion, the surface conditions of the cathode and the current density. The decisive factor in the formation of crystallization nuclei is the effect of the surface-active ions in the fused salts. In highly concentrated fusions the rate of nuclei formation is controlled by the kinetics of a new phase that forms on the cathode surface, the atoms migrating on the cathode surface. In the case of low concentrations, the nuclei formation is conditioned by the kinetics of diffusion both in the fusion and on the cathode surface. During the electrolysis of fusions the characteristic constants of the fusing change their value regardless of the degree of concentration. These patterns change when adsorption occurs on the cathodeas in chloride fusions, in which nuclei with a submicroscopic structure were observed. The formation of crystals from nuclei is selective and takes place on those nuclei on which the currents concentrated either as a result of small surface curvature radii or, lower surface energy or under conditions of polarization that cause the desorption of surface-active ions. Orig. art. has: 14 figures and 2 tables

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NR REF SOV: 024 OTHER: 027

Card 2/2

NIKANOROV, Vasiliy Alekseyevich, prof.; KUZNETSOV, Aleksey
Kirillovich, dots.; POLYAKOV, P.Ya., red.

[Veterinary surgery and orthopedia] Veterinarnaia khirurgiia i ortopediia. Leningrad, Kolos, 1965. 483 p.
(MIRA 18:7)

TSION, Robert Adol'fovich; PANOVA, Lidiya Grigor'yevna; POLYAKOV,
P.Ya., red.

[Sheep diseases] Bolezni ovets. 2., perer. i dop. izd. Leningrad, Kolos, 1964. 96 p.
(MIRA 18:3)

KUZ'MIN, Vitaliy Vasil'yevich, prof., doktor veter. nauk; POLYAKOV, P.Ya., red.; FRIDMAN, Z.L., tekhn. red.

[How to increase the resistance of farm animals to infectious diseases] Kak povysit' ustoichivost' sel'skokhoziaistvennykh zhivotnykh k zaraznym zabolevaniiam. Leningrad, Izd-vo sel'-khoz.lit-ry, zhurnalov i plakatov, 1961. 113 p. (MIRA 15:1)
(Stock and stockbreeding—Diseases and pests)

TRILENKO, Petr Andreyevich, prof., doktor veterinarnykh nauk; POLYAKOV,
P.Ya., red.; BARANOVA, L.G., tekhn. red.

[Vibriosis in cattle and sheep] Vibrioz krupnogo rogatogo skota
i ovets. Leningrad, Izd-vo sel'khoz.lit-ry, zhurnalov i plakatov,
1961. 246 p. (MIRA 15:2)
(Cattle—Diseases) (Sheep—Diseases) (Abortion in animals)

SHAKALOV, Karp Iovich, prof., doktor veter, nauk; POLYAKOV, P.Ya., red.;
BARANOVA, L.G., tekhn. red.

[Pathogenetic therapy of animal diseases] Patogeneticheskaia terapiia zabolevanii zhivotnykh. Izd.2., perer. i dop. Leningrad, Sel'khozgiz, 1961. 494 p. (MIRA 15:7)
(Veterinary medicine)

SOKOLOV, Nikolay Ivanovich; VAYNTRAUB, Aleksandr Moiseyevich
[deceased]; POLYAKOV, P.Ya., red.; YAKOVLEVA, V.K., tekhn.
red.

[First aid in calving] Pervaia pomoshch' pri otelakh. Izd.2.,
dop. i ispr. Leningrad, Sel'khozgiz, 1961. 69 p.
(MIRA 15:8)

(Veterinary obstetrics)

PANFEROV, Andrey Semenovich; POLYAKOV, P.Ya., red.; BARANOVA, L.G.,
tekhn. red.

[Getting rid of brucellosis in cattle; work practices on the "Lesnoe" State Farm] Likvidatsiia brutselleza krupnogo rogatogo skota; opyt raboty sovkhoza "Lesnoe." Leningrad, Sel'khozizdat, 1962. 75 p. (MIRA 15:6)

(Brucellosis in cattle)

PROKHOROV, Mikhail Il'ich, doktor veter. nauk; POLYAKOV, P.Ya., red.; BARANOVA, L.G., tekhn. red.

[Microbiological control of harmful rodents]Mikrobiologicheskii metod bor'by s vrednymi gryzunami. Leningrad, Sel'khozizdat, 1962. 132 p. (MIRA 16:2)

(Rodent control--Biological control)

KATSNEL'SON, Zakhar Saulovich, prof.; RIKHTER, Irina Dmitriyevna,
prof.; POLYAKOV, P.Ya., red.; BARANOVA, L.G., tekhn. red.

[Practical work in histology and embryology] Prakticheskie zaniatiia po gistologii i embriologii. Izd.2., perer. Moskva, Izd-vo sel'khoz.lit-ry, zhurnalov i plakatov, 1963. 275 p. (MIRA 16:7)

(Histology--Laboratory manuals)
(Embryology--Laboratory manuals)

KONONOV, G.A., kand. veter. nauk; POLYAKOV, P.Ya., red.; BARANOVA, L.G., tekhn. red.

[Concise manual for a veterinary feldsher] Kratkii spravochnik veterinarnogo fel'dshera. Izd.2., perer. i dop. Moskva, Sel'khozizdat, 1963. 599 p. (MIRA 17:1)

VOKKEN, Gans Gansovich; POLYAKOV, P.Ya., red.

[Veterinary radiology] Veterinarnaia radiologiia. Moskva, Izd-vo "Kolos," 1964. 268 p. (MIRA 17:6)

CHERNYAK, Valentin Zakharovich; DOBIN, Mendel' Aronovich; KOKURICHEV,
Pavel Ivanovich; POLYAKOV, P.Ya., red.; BARANOVA, L.G.,
tekhn. red.

[Legal veterinary expertise] Sudebno-veterinarnaia ekspertiza.
3., ispr. i dop. izd. Leningrad, Sel'khozizdat, 1963. 254 p.
(MIRA 16:7)

(Veterinary jurisprudence)

DOBIN, Mendel' Aronovich, prof.; KUKURICHEV, Pavel Ivanovich, prof.;
POLYAKOV, P.Ya., red.; VARANOVA, L.G., tekhn. red.;
FRIDMAN, Z.L., tekhn. red.

[Laboratory manual on veterinary pathological anatomy and autopsy] Praktikum po veterinarnoi patologicheskoi anatomii i vskrytiiu. Leningrad, Sel'khozizdat, 1963. 239 p.
(MIRA 16:7)

(Veterinary pathology) (Autopsy)

POLYAKOV, P. Ya

PROTASOV, A.I., dotsent; SINEV, A.V., prof.; SMIRNOV, A.M., dotsent; BAZHENOV, A.N., dotsent; VIL'NER, A.M., prof.; BASHMURIN, A.F., dotsent; SHAKALOV, K.I., prof.; VELLER, A.A., prof.; NIKANOROV, V.A., prof.; FEDOTOV, V.P., dotsent; KUZNETSOV, G.S., prof.; BOCHAROV, I.A., prof.; SHCHERBATYKH, P.Ya., prof.; TSION, R.A., prof.; GRIBANOVSKAYA, Ye.Ya., dotsent; ADAMANIS, V.F., assistent; KOLABSKIY, N.A., dotsent; MITSKEVICH, V.Yu., dotsent; GUSEVA, N.V., dotsent; MYSHKIN, P.P., dotsent; GUBAREVICH, Ya.G., prof.; FEDOTOV, B.N., prof.; DOBIN, M.A., dotsent; SIROTKIN, V.A., prof. [deceased]; KUZ'MIN, V.V., prof.; YEVDOKIMOV, P.D., prof.; POLYAKOV, A.A., prof.; POLYAKOV, P.Ya., red.; BARANOVA, L.G., tekhn.red.

[Concise handbook for the veterinarian] Kratkii spravochnik veterinarnogo vracha. Leningrad, Gos.izd-vo sel'khoz.lit-ry, 1960. 624 p. (MIRA 13:12)

(Veterinary medicine)

POLTEV, Vasiliy Ivanovich; POLYAKOV, P.Ya., red.

[Diseases of bees] Bolezni pchel. 4., dop. i ispr. izd.
Leningrad, Izd-vo "Kolos," 1964. 288 p. (MIRA 17:8)

GUBAREVICH, Yakov Grigor'yevich, prof.; POLYAKOV, P.Ya., red.; CHUNAYEVA, Z.V., tekhn.red.; BARANOVA, L.G., tekhn.red.

[Veterinary obstetrics and gynecology] Veterinarnoe akusherstvo i ginekologiia. Izd.4. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 368 p. (MIRA 14:1)

(Veterinary obstetrics)

KONONOV, G.A., kand.veterin.nauk; KUZ'MIN, V.V., prof., red.; POLYAKOV, P.Ya., red.; FRIDMAN, Z.L., tekhn.red.

[Concise handbook for the veterinary feldsher] Kratkii spravochnik veterinarnogo fel'dshera. Leningrad, Gos.izd-vo sel'khoz.lit-ry, 1960. 447 p. (MIRA 13:12)

(Veterinary medicine)

KUZNETSOV, Georgiy Sergeyevich, prof.; POLYAKOV, P.Ya., red.

[Surgical operations on cattle] Khirurgicheskie operatsii u krupnogo rogatogo skota. Leningrad, Kolos, 1964. 247 p. (MIRA 17:12)

SMIRNOV, Aleksey Mironovich, prof.; POLYAKOV, P.Ya., red.

[Obtaining gastric juice from horses and its use in veterinary medicine] Poluchenie zheludochnogo soka ot loshadei i primenenie ego v veterinarii. Leningrad, Kolos, 1965. 42 p. (MIRA 18:10)

POLYAKOV, R.

"Gamma" magnetic tape recorder. Radio no.3:55-59 Mr '60.
(MIRA 13:6)
(Magnetic recorders and recording)

KLIMOVITSKIY, A.M.; KRYUCHKOV, V.V.; ERLIKH, G.M.; SAPILOVA, A.V., retsenzent; KAMINSKIY, L.M., retsenzent; MISHUSTINA, H.F., red.; POLYAKOV, R.M., red.; SINICHENKO, L.M., red.; RYABOVA, L.N., tekhn. red.

[Mechanization and automatic control of car exchange complexes] Mekhanizatsiia i avtomatizatsiia kompleksov obmena vagonetck. Moskva, 1962. 55 p. (MIRA 16:8)

1. Moscow. TSentral'nyy institut informatsii tsvetnoy metallurgii.
(Mine railroads—Cars) (Automatic control)

POTEMKIN, K.V.; SPITSYN, A.; SHUGAYEV, I.A.; POL'KIN, S.I.; SAKSAGANSKAYA, I.P.; ANDREYEV, P.I.; POLYAKOV, R.M., red.; VERIGO, K.M., red.

[Production of zirconium and hafnium in capitalist countries] Proizvodstvo tsirkoniia i gafniia v kapitalisticheskikh stranakh. Moskva, Pts.1-3. 1962. 157 p. (MIRA 17:4)

1. Moscow. TSentral'nyy institut informatsii tsvetnoy metallurgii.

POLYAKOV, R.M., KULIKOV, A. V. KOP'YEV, V.YA

Leninogorsk-Mining Engineering

Work of combined crews at the Leninogorsk combine. Sor. zhur. no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress October 1952. UNCLASSIFIED

KORNILOV, I.I.; POLYAKOV, R.S.

Hardness of some niobium alloys at high temperatures. Atom. energ. 10 no.2:170-172 F '61. (MIRA 14:1)
(Niobium alloys)

POLYAKOV, S., doktor tekhn. nauk

Large-panel buildings in earthquake districts. Zhil. stroi. no.11:30-32 N '61. (MIRA 16:7)

(Earthquakes and building)

POLYAKOV, S., doktor tekhn.nauk; KONOVODCHENKO, V. inzh.

Economical brick blokcs. Sel'.stroi. 15 no.1:20-22 Ja '61.
(MIRA 14:3)

(Building blocks)

POLYAKOV, S., starshiy inspektor.

First class motion-picture operator. Kinomekhanik no.11:9 N '53.
(MLRA 6:11)

1. Upravleniye kul'tury Bryanskogo oblispolkoma.
(Moving-picture projection)

KOTOV, Yu.; MAYBORODA, O.; POLYAKOV, S.; KHAYDUKOV, F.

The "Junior" racing automobile. Za rul. 18 no.5:16a-16d My '60.
(MIRA 14:3)

(Automobiles, Racing)

BYKHOVSKIY, V., doktor tekhn.nauk; POLYAKOV, S., doktor tekhn.nauk

Problem of designing multistory buildings in seismic areas. Zhil. stroi. no.9:10-11 '65. (MIRA 18:11)

VOL'PER, I.N., inzh.; POLYAKOV, S.A.

Pneumatic unloader for cottonseeds. Masl.-zhir. prom. 29 no.5:41-43 My '63. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov.
(Cottonseed) (Pneumatic conveying)

SYCHEV, Aleksey Yakovlevich, professor, doktor ekonomicheskikh nauk; DUMLER, Sergey Avgustovich, inzhener; SIVKOV, Viktor Mikhaylovich; UMANSKAYA, M.M., inzhener, redaktor; GORELIK, I.G., kandidat ekonomicheskikh nauk, redaktor; BOGOMOLOV, V.I., inzhener; KARCHEVSKIY, V.A., inzhener, redaktor; PEKELIS, I.B.; POLYAKOV, S.A., inzhener; SHTEYMBERG, Ye.S.; CHURILOVICH, L.M.; AVRUTSKAYA, R.F., redaktor; EVENSON, I.M., tekhnicheskiy redaktor.

[The economics of non-ferrous metallurgy] Ekonomika tsvetnoi metallurgii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1954. 291 p. (MLRA 8:2)

(Nonferrous metals--Metallurgy) (Metal industries)

POLYAKOV, S. A.

"The Saving and Replacement of Non Ferrous Metals in the Third Five-Year Plan", Tsvet. Met.,14, No. **4-5**, 1939.

[redacted] Report U-1506, 4 Oct. 1951

BELAYENKO, F.A., prof., doktor tekhn.nauk; KRASNOPOL'SKIY, A.A., gornyy inzhener; DRUKOVANYY, M.F., gornyy inzhener; VOZNESENSKIY, V.V., gornyy inzhener; DZYABURA, G.F., gornyy inzhener; POLYAKOV, S.D., gornyy inzhener

Results of using single-row and multirow and short-delay blasting in pits of the Yelenovka Mining Administration. Vzryv. delo no.47/4:74-84 '61. (MIRA 15:2)

1. Dnepropetrovskiy gornyy institut, Yelenovskoye rudoupravleniye.
(Yelenovka region (Donetsk Province)--Blasting) (Boring)

POLYAKOV, S.I., inzh.

Shortcomings of the disconnecting electromagnets of PS-10 drives. (MIRA 18:10)
Elek. sta. 36 no.11:87 N '65.

POLYAKOV, Sergey Ivanovich; SUKHOV, I.V, inzh., red.; FREGER, D.P., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Stages in developing the processes of machine assembly] Etapy razrabotki tekhnologicheskikh protsessov sborki mashin; opyt raboty zavoda im. Karla Marksa. Leningrad, 1962. 20 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.10) (MIRA 15:10)
(Machine-shop practice)

KULIKOV, A.I.; POLYAKOV, I.M.; POLYAKOVA, S.I.

Quality of seed disinfection at corn processing plants. Zashch. rast. ot vred. i bol. 7 no.11:24-25 N '62. (MIRA 16:7)

POLYAKOV, S.I.

Unit for obtaining lime from deposits of water softening stations. Vod. i san. tekh. no.3:38 Mr '57. (MLRA 10:6)
(Great Britain--Lime)

ACC NR: AP6035820 (N) SOURCE CODE: UR/0413/66/000/020/0020/0021

INVENTOR: Sizov, Ye. S.; Polyakov, S. I.; Sizova, K. G.; Strunin, N. M.

ORG: none

TITLE: Sheet metal forming unit. Class 7, No. 186957.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 20-21

TOPIC TAGS: metal forming, sheet metal, ~~forming.~~ hydrostatic pressure, ~~metal forming.~~ metal forming ~~unit~~ press

ABSTRACT: This Author Certificate introduces a unit for sheet metal forming. The unit has a chamber which can be evacuated or filled with inert gas, a die, and a pressure container (Fig. 1). To form low-ductility metals, the unit is provided with an attachment for heating the female die, the blank, and the material which plays the part of the male die, all of which are moved into the container by the rod of a hydraulic cylinder installed in the housing coaxially with the container. In a variant, the heating equipment is located outside the container and consists of two semicylinders with heaters enveloping the dies and the blank during the pre-

Card 1/2 UDC: 621.983.32.06

BERNATSKIY, N.F.; POLYAKOV, S.I.

[Buildings for livestock from local materials] Zhivotnovodcheskie postroiki iz mestnykh materialov. Kazan', Tatgosizdat, 1951. 63 p. (MLRA 9:4)
(Farm buildings)

TOL'TSMAN, V.F., kand. tekhn. nauk; POLYAKOV, S.I., inzh.

Relation between pressure losses and turbulent pulsations of the average stream flow rate along the diameter of a smooth circular pipe. Vod. i san. tekh. no.1:1-2 Ja '66. (MIRA 19:1)

POLYAKOV, S.K.; YANSUPOVA, E.Z. (Samarkand)

Effect of nicotine on the organism of female workers employed in tobacco fermentation chambers and means of improving their sanitary conditions. Gig.truda i prof.zab. 6 no.12:42-43 D'62. (MIRA 16:7)

1. Gorodskaya sanitarno-epidemiologicheskaya stantsiya, Samarkand.
(TOBACCO WORKERS--DISEASES AND HYGIENE)
(NICOTINE--PHYSIOLOGICAL EFFECT)
(WOMEN--HEALTH AND HYGIENE)

POLYAKOV, S.K. (Samarkand)

Purulent diseases in workers of the weaving shops of the Samarkand "Khudzhum" factory and measures to reduce morbidity. Gig. truda. i prof. zab. 4 no.6:45-47 Je '60. (MIRA 15:4)

1. Gorodskaya sanitarno-epidemiologicheskaya stantsiya, Samarkand.
(SAMARKAND--TEXTILE WORKERS--DISEASES AND HYGIENE)

L 9430-66 EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD
ACC NR: AT5025547
SOURCE CODE: UR/3168/62/000/001/0003/0009

AUTHORS: Ametov, M. Yu.; Polyakov, S. M.
44,55 44,55

ORG: Azerbaidzhan Petroleum and Chemical Institute im. M. Azizbekov (Azerbaydzhanskiy institut nefti i khimii) 44,55

50
B+1

TITLE: Increasing the life of parts operating in a furnace gas atmosphere by liquid calorizing 16

SOURCE: Baku. Azerbaydzhanskiy institut nauchno-tekhnicheskoy informatsii. Sbornik nauchno-tekhnicheskoy informatsii. Seriya Mashinostroitel'naya promyshlennost', no. 1, 1962. Tekhnika i tekhnologiya v mashinostroyenii (Engineering and technology in machinery manufacture), 3-9

TOPIC TAGS: calorizing, muffle furnace, aluminum, metal coating/ ST3 steel alloy, ACh 3 aluminum
19 27 14

ABSTRACT: Liquid calorizing (aluminum coating) to increase the life of steel parts operating in a furnace atmosphere (muffle furnace) was investigated. Specimens (20 x 70 mm) of steel ST3 were cleaned and dipped into a molten aluminum bath (6-8% iron content) at temperatures of 700-900C. It was found that the best temperature

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Card 2/2

AMETOV, M.Yu.; POLYAKOV, S.M.

Using liquid-metal aluminizing for increasing the strength of parts working in a furnace-gas atmosphere. Sbor.nauch.-tekh.inform.Azerb. inst.nauch.-tekh.inform.Ser.Mashinostroi.prom. no.1:3-9 '62. (MIRA 18:8)

1. Azerbaydzhanskiy institut nefti i khimii im. M.Azizbekova.

L 3900-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD

ACC NR: AP5024557 UR/0070/65/010/005/0732/0734

548.5

36

B

AUTHOR: Laverko, Ye. N.; Marakhonov, V. M.; Polyakov, S. M.
55 55 55

TITLE: Structure of GaAs whiskers formed on germanium
55, 16 7

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 732-734

TOPIC TAGS: gallium arsenide, germanium single crystal, substrate, gallium arsenide whisker, crystal structure

ABSTRACT: An electron diffraction and electron microscope study has been made of GaAs epitaxial layers deposited in vacuum (0.05 tor) by the Günter method on (111) faces of Ge single crystals. Formation of hexagonal GaAs whiskers of the wurtzite type, with the base plane (0001) oriented parallel to the Ge (111) plane, was observed. The crystals were 3 μ or more in length and about 0.3 μ thick at the base. The GaAs layers had a mosaic crystalline structure. The growth of GaAs took place on Ga substrates heated to 400 to 600C and was determined by the direction of the molecular flow of Ga. The authors attribute the growth of wurtzite-type GaAs whiskers to an excess of Ga on the substrate structure, which triggers the vapor-liquid-crystal mechanism of growth. In the presence of excess Ga, the whiskers also grow on glass substrates by a basically identical mechanism, but in the absence of a monocrystalline substrate, the whiskers are polycrystalline. Orig. art. has: 2 figures. [BO]

ASSOCIATION: none

Card 1/2

L 3900-66

ACC NR: AP5024557

0

SUBMITTED: 26Mar65 ENCL: 00 SUB CODE: SS

NO REF SOV: 006 OTHER: 006 ATD PRESS: 4119

Card 2/2 Mrd

POLYAKOV, S.M.; ZIMINA, T.S.

Obtaining replicas by the simultaneous evaporation of carbon and preshadowed substance. Zav.lab. 29 no.8:973-974 '63.
(MIRA 16:9)

(Electron microscopy)

Polyakov, S.M.

24(7) **PHASE I BOOK EXPLOITATION** SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) [Lvov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Milyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Britske, M.E. Studying Ionization and Excitation Conditions in the Plasma of an Arc Discharge 338

Rotkina, N.A., and S.M. Solodovnik. Spectrographic Method for the Determination of Impurities in Alkali and Alkaline-earth Metals 341

Blokh, I.M. Spectrographic Determination of Dispersed Elements in Ores and Concentrates, and Determination of Impurities in the Dispersed Elements 343

Polyakov, S.M., and A.K. Rusanov. Spectrographic Analysis of Rare Earth Elements 346

Shvangiradze, R.R. Spectrum Analysis of Mixtures of Rare Earth Elements 350

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Card 20/31

POLYAKOV, S.M.; RUSANOV, A.K.

Spectrographic analysis of rare earth elements. Fiz.sbor. no.4:346-350 '58. (MIRA 12:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut redkikh i malykh metallov. Giredmet.
(Rare earths--Spectra)

MELAMED, Sh.G., POLYAKOV, S.M., ZMESKOVA, M.G.

Spectrum analysis of the reare earths. Zav.lab 26 no.5:554-556 '60. (MIRA 13:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti.
(Rare earths--Spectra)

POLYAKOV, S. N.

"The Influence of Manganese and Molybdenum on the Solubility of Carbon in Alpha-iron and on the Kinetics of the Separation of Carbon, by Internal Friction from a Solid Solution Containing Manganese and Molybdenum."

report presented at Inter-vuz Conference on Relaxation Phenomena in Pure Metals and Alloys, 2-4 Apr 1958. at Moscow Inst. of Steel.

(Inst. of Ferrous Metallurgy Acad. Sci. Ukr SSR)
Vest. Vysshe Shkoly, 9, 72-3, 1958.
(Piguzov, Yu. V.)

66518

SOV/137-59-7-15804D

18.1110

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 7, p 229 (USSR)

AUTHOR: Polyakov, S.N.

TITLE: Annealing Brittleness of Carbon Steel

PERIODICAL: Avtoref. dis. kand. tekhn. n., In-t chern. metallurgii AS UkrSSR, Dnepropetrovsk, 1958

ABSTRACT: Investigations were carried out into the effect of heat treatment conditions (annealing temperature, chilling rate after annealing) and the Mn and P content (within the steel grade composition) upon annealing brittleness of carbon rail steel (0.6% C). It was stated that annealing brittleness in carbon steel had a reversible character and developed within the same temperature range (500 - 650°C) as in alloy steels. It was proved that maximum brittleness occurred at a chilling rate of 20 degrees per hour. Higher Mn and, in particular, P content in the composition increased annealing brittleness. Causes of the origin of annealing brittleness were investigated with the use of a complex method determining the microstructure,

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hardness, electric resistance, H_C and internal friction. The possibility of the positive effect of Mo to prevent development of annealing brittleness was investigated as well.

I.B.

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Card 2/2

SOV/21-58-2-5/28

AUTHORS: Starodubov, K.F., Member of the AS UkrSSR, and Polyakov, S.N.

TITLE: Solubility of Carbon in Alpha Iron Alloyed by Manganese and Molybdenum and the Kinetics of Carbon Segregation from the Solution (Rastvorimost' ugleroda v α -zheleze, legirovannom margantsem i molibdenom, i kinetika vydeleniya ugleroda iz rastvora)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 2, pp 135-138 (USSR)

ABSTRACT: The authors studied the behavior of carbon in alpha iron alloyed by 0.75 % manganese and 0.40% molybdenum by the method of internal friction. The presence of these admixtures lowered the solubility of carbon in alpha iron. If, however, manganese alone is present to the amount of 0.75%, the relative quantity of segregated carbides is three times as great as in pure iron. In the case of the presence of 0.40R Mo, the relative quantity of the segregated phase is the same as in pure iron. The authors also studied the kinetics of the segregation process and established that manganese delays considerably its beginning, whereas molybdenum hardly changes its kinetics as compared with the case of pure iron. While investigating iron alloyed by molyb-

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SOV/21-58-2-5/28

Solubility of Carbon in Alpha Iron Alloyed by Manganese and Molybdenum and the Kinetics of Carbon Segregation from the Solution

denum it was found that on tempering at about 550 - 650°C a very stable carbide is formed, and the solubility of carbon in alpha iron almost vanishes. On the basis of the results obtained, the effect of manganese and molybdenum on the manifestation of reversible high-temperature tempering brittleness is explained. There are 3 graphs, 1 table and 9 references 6 of which are Soviet, 2 English and 1 Japanese.

ASSOCIATION: Institut chërnoy metallurgii AN UkrSSR (Institute of Ferrous Metallurgy of the AS UkrSSR)

SUBMITTED: May 6, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

STARODUBOV, K.F., akad.; POLYAKOV, S.N., inzh.

Temper brittleness in carbon steel. Izv. vys. ucheb. zav.; chern. met. no.3:131-144 Mr '58. (MIRA 11:5)

1.Dnepropetrovskiy metallurgicheskiy institut.
(Steel--Brittleness)

SOV/126-6-6-22/25

AUTHORS: Polyakov, S. N. and Starodubov, K. F.

TITLE: Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum (Vliyaniye margantsa i molibdena na rastvorimost' ugleroda v al'fa-zheleze i kinetika protsessa vydeleniya ugleroda iz al'fa-zheleza v prisutstvii margantsa i molibdena)

PERIODICAL: Fizika metallov i metallovedeniye, 1958, Vol 6, Nr 6, pp 1110-1121 (USSR)

ABSTRACT: Investigation of the solubility of carbon and nitrogen in commercial iron is of much theoretical and practical interest, particularly from the point of view of elucidating the nature of such phenomena as temper brittleness, ageing, blue brittleness. The view has been expressed by various authors (Refs.1, 2), that the cause of temper brittleness is the effect of the alloying elements on the shape of the curve of solubility of the carbon in α-iron. However, as far as the authors are aware, no direct experimental data are available on this point, mainly since investigation of the solubility of carbon in α-iron is difficult due to the fact that its content in the solid solution is low (Ref.3). Finkel'shteyn and Rozin (Ref.4), Wert (Ref.5) and Dijkstra (Ref.6) applied the method

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of internal friction, based on the occurrence of pronounced peaks of internal friction as a function of temperature for studying the behaviour of carbon and nitrogen in solid solutions. For an oscillation frequency of 1 c.p.s. a peak due to nitrogen occurs at 20°C and a peak due to carbon occurs at 30°C. Snoek (Ref.7) has shown that this effect ceases after complete elimination of carbon and nitrogen and therefore these internal-friction peaks are due to the penetration of these elements into the atom lattice and it is to these elements that this effect is ascribed. It follows from the theory of low-temperature anomalies of the internal friction that the magnitude of the internal friction peak is proportional to the content of atoms of carbon or nitrogen in the solid solution if their concentration is low, irrespective of the shape and dimensions of the excess phases (carbides and nitrides). This fact opens up extensive possibilities for investigating the processes of decomposition of solid solutions of carbon

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and nitrogen in α-iron and the influence of various alloying elements on the solubility of carbon and nitrogen in α-iron. The aim of the work described in this paper was to study the influence of Mn and Mo on the character of the decomposition of the solid solution of carbon in α-iron and the plotting of the high-temperature part of the curve of solubility of carbon in iron in the presence of these elements. In choosing the materials for investigation the authors took into consideration the fact that manganese increases the susceptibility of the steel to temper brittleness (Ref.8) whilst molybdenum, in quantities of 0.4 - 0.5%, reduces this susceptibility. The experimental melts were prepared in such a way that two ingots were produced from a single melt, one being of a commercially-pure iron, the other being of iron alloyed with the appropriate element. The alloys were produced in a vacuum-induction furnace; the ingots were subjected to diffusion annealing for 24 hours at 1200°C and were forged into rods of 8 mm dia. The starting material for the experiments was wire of 0.7 mm dia, produced by drawing of ground blanks. The chemical composition

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Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum

of the experimental melts is entered in the table herewith:

Melt Nr	Composition, %								
	C	Mn	Si	P	S	Mo	N	H	O
92-1	0.03	0.04	0.10	0.006	0.03	-	0.003	0.0006	0.005
92-2	0.03	0.75	0.09	0.006	0.03	-	0.005	0.0004	0.006
93-1	0.03	0.04	0.05	0.006	0.03	-	0.006	0.0003	0.009
93-2	0.03	0.04	0.06	0.007	0.03	0.40	0.003	0.0002	0.002

The internal friction was measured in the laboratories of the Moscow Steel Institute, taking the logarithmic decrement divided by π as a measure for the internal friction. The results of the following are given and discussed:

a) influence of manganese on the solubility of carbon in the

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α-iron (in Fig.1 the temperature dependence of the internal friction is graphed); b) the influence of manganese on the kinetics of separation of carbon from α-iron. It can be seen from the graph, Fig.2, that the separation of carbon in pure iron differs from that of iron containing 0.75% Mn (in Fig.2 the dependence of the maximum of the internal friction on the annealing duration at 720, 650 and 550°C is graphed). If iron is alloyed with up to 0.75% Mn, the process of separation is delayed; there is an incubation period of about 35 min. Following that, the process of separation is intensive and terminates in 15-20 min (at 650 and 550°C, respectively). The presence of 0.75% Mn also increases the relative quantity of the new phase produced during slow cooling; c) influence of Mo on the solubility of carbon in β-iron. The measured temperature dependence of the internal friction is entered in the graphs, Fig.3 (left and right). These results were obtained after heat treatment at 720, 650 and 550°C, respectively, with optimum heating durations, i.e. such that a stable peak is achieved. It was found that tempering at 650 to 550°C leads, after a certain time (40 - 60 min) to the

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SOV/126-6-6-22/25

Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum

formation of a special molybdenum carbide which completely liquidates the temperature solubility of carbon in the α-iron in the range 720 - 550°C; d) influence of Mo on the kinetics of separation of the carbon from α-iron. The kinetics of this process can be studied from the graphs, Fig.4; the presence of 0.4% Mo does not show a strong decelerating influence on the decomposition of the solid solution. In the given case, there is no incubation period and the entire process terminates in 30 or 15 min at 650 and 550°C, respectively. The authors explain the possible mechanism of the influence of Mn and Mo on the Type II temper brittleness as follows: the presence of these elements, Mn and Mo, changes the temperature characteristics of the solubility of carbon in the body of the grain and apparently also at the boundaries of the α-iron grains which brings about an increase (in presence of Mn) or a decrease (in presence of 0.4% Mo) in the relative quantity of the carbides separated during slow cooling. In

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Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum

some cases, the presence of special Mo carbides almost liquidates the solubility. Compared with pure iron, Mn slows down the process of separation, whilst Mo does not. The kinetics of the process may play a predominant role in the embrittlement and this seems to be confirmed by the data of Bhat and Libsh (Ref.27). On the basis of the results obtained by the method of internal friction, the authors plotted the curves of the limited solubility in the temperature range 720 to 550°C. Their conclusions can be summarised thus:
1) Mn, in a quantity of 0.75% and Mo, in a quantity of 0.4%, reduces at all temperatures the solubility of carbon in α-iron. However, the temperature characteristic of the solubility curve is such that in the presence of 0.75% Mn, the relative quantity of the separation phase in the temperature range 650 - 550°C is greater than for pure iron and in the case of 0.4% Mo, it is the same as in pure iron;
2) the kinetics of the process of separation of carbon from the solid α-solution in the case of alloying with Mn and Mo differ greatly. Whilst alloying with Mn brings about an

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SOV/126-6-6-22/25

Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum

incubation period, there is no incubation period in the case of alloying with Mo;
3) the activation energy of the diffusion of carbon in the case of alloying with Mn and Mo was determined; this was found to equal 19 000 ± 1000 cal/mol in both cases, i.e. it was found that 0.75% Mn and 0.4% Mo have practically no influence on the speed of displacement of carbon in α-iron;
4) the activation energy of the process of decomposition was evaluated analytically and it was found that the initial stage of the decomposition is determined by the diffusion of the carbon;
5) an explanation is offered (see above) of the influence of Mn and Mo on the development of Type II temper brittleness.

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Influence of Manganese and Molybdenum on the Solubility of Carbon in α-iron and the Kinetics of the Process of Separation of Carbon from the α-iron in the Presence of Manganese and Molybdenum

which is based on the differing kinetics of decomposition of the solid solution. Acknowledgments are made to B. N. Finkel'shteyn and Yu. V. Piguzov for their valuable advice and interest in the work described in this paper. There are 6 figures, 1 table and 28 references; 18 of the references are Soviet, 9 English and 1 is German.

ASSOCIATION: Institut chernoy metallurgii AN,USSR(Institute of Ferrous Metallurgy, Academy of Sciences Ukrainian SSR)

SUBMITTED: June 28, 1957.

Card 9/9

POLYAKOV, S. N.

PHASE I BOOK EXPLOITATION SOV/5305

Moscow. Institut stali

Relaksatsionnyye yavleniya v metallakh i splavakh; trudy Mezhvuzovskogo soveshchaniya (Relaxation Phenomena in Metals and Alloys; Transactions of the Inter-Institute Conference) Moscow, Metallurgizdat, 1960. 326 p.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR and Moskovskiy institut stali imeni I.V. Stalina.

Ed. (Title page): B.N. Finkel'shteyn; Ed. of Publishing House: Ye.I. Levit; Tech. Ed.: A.I. Karasev.

PURPOSE: This collection of articles is intended for personnel in scientific institutions and schools of higher education and for physical metallurgists and physicists specializing in metals. It may also be useful to students of these fields.

COVERAGE: The collection contains results of experimental and theoretical investigations carried out by schools of higher education and scientific research institutions in the field of the relaxation phenomena in metals and alloys. Several articles are devoted to the investigation—by the internal-friction method—of the decomposition of supersaturated solid solutions. Also analyzed are the defects of the crystalline lattice, plastic deformations, high-temperature behavior of alloys, and creep. Problems of the relation between internal friction and temper brittleness, the use of the method of internal friction in the investigation of powder-metallurgy products, and the mechanism of impact fatigue are discussed. The collection also contains articles on the damping characteristics of materials, elastic after-effect, and the new slow-detection method. No personalities are mentioned. References follow most articles. There are 366 references: 192 Soviet and 174 non-Soviet.

Suris, R.A. [Moscow Steel Institute]. On Dispersion Correlations in the Theory of Elastic Relaxation 55

Starodubov, K.F., and A.A. Sazonova [Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)]. Effect of the Tempering Temperature After Quenching and the Temperature of Isothermal Processing on the Vibration Damping in the Silicon Spring Steel 58

Piguzov, Yu.V., M.F. Alekseyenko, and L.S. Fedotova [Moscow Steel Institute and Vsesoyuznyy institut aviatsionnykh materialov (All-Union Institute of Aviation Materials)]. Effect of the Temper Brittleness of High-Chromium Steels on the Internal Friction 64

Chernikova, I.N. [Moscow Steel Institute]. Study of the Tempering of Carbon Steels by the Internal-Friction Method 85

Krishtal, M.A., and S.A. Golovin [Tul'skiy mekhanicheskiy institut (Tula Mechanical Institute)]. On the Problem of the Internal Friction in Hardened and Tempered Steel 95

Krishtal, M.A., and S.A. Golovin [Tula Mechanical Institute]. Relative Damping of Torsional Vibrations in Heat-Treated U7A steel 101

Miček, Karel, and Karel Tuman [Institute of Technical Physics of the Czechslovak Academy of Sciences]. Aging of the Aluminum-Silver Alloy 104

Mal'tseva, G.K., and V.S. Postnikov [Kemerovskiy pedagogicheskiy institut (Kemerovo Pedagogical Institute)]. Decomposition of the Supersaturated Beryl-Copper Solid Solution 109

Polyakov, S.N. [Institut chernoy metallurgii AN UkrSSR (Institute of Ferrous Metallurgy of the Academy of Sciences UkrSSR)]. Behavior of Carbon in α-Iron Alloyed With Manganese and Molybden 118

Livshits, B.G., Yu.S. Avraamov, V.R. Osvenskiy, S.O. Meshchennaya, and L.N. Belyakov [Moscow Steel Institute]. Internal Friction of Metastable Solid Solutions 126

Usova, L.F. [Moscow Steel Institute]. Investigation of the Carbon Influence on the Properties of Low-Carbon Steel by the Method of Measuring Internal Friction 138

Ashmarin, G.M. [Moscow Steel Institute]. The High-Temperature Internal Friction of Iron-Vanadium Alloys 146

2/

S/148/60/000/008/007/018
A161/A029

AUTHORS: Starodubov, K.F.; Polyakov, S.N.

TITLE: The Effect of Annealing Temperature on the Hardness and Specific Destruction Work in Х12 (Kh12), Х12Ф (Kh12F) and Х12Ф1 (Kh12F1) Steel

PERIODICAL: Izvestiya vyssikh uchebnykh zavedeniy. - Chernaya metallurgiya, 1960, No. 8, pp. 115 - 119

TEXT: The three steel grades Kh12, Kh12F and Kh12F1 have the following chemical composition:

	Content %							
Grade	C	Si	Mn	Cr	Ni	V	S	P
Kh12	2.1	0.19	0.28	11.62	0.14	-	0.012	0.026
Kh12F	1.56	0.25	0.25	11.9	-	0.35	0.011	0.025
Kh12F1	1.4	0.20	0.35	11.5	-	0.7 - 0.8	0.011	0.02

and belong to the ledeburite class. The specific destruction work was investigated on specimens without notch annealed for 4 h at 950°C prior to final heat treatment.. The quenching temperature was so chosen as to obtain a minimum of residual austenite (i.e., for primary hardness). V.M. Doronin's method (Ref. 4)

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A161/A029

The Effect of Annealing Temperature on the Hardness and Specific Destruction Work in Kh12, Kh12F and Kh12F1 Steel

was used for heat treatment: quenching in oil from 1,000°C for Kh12 and Kh12F, and from 1,050°C for Kh12F1; holding for 15 min; annealing at 150 - 700°C at 25 - 50°C intervals, holding 1 h; cooling in air. Hardness was measured by the Rockwell C scale; the coercive force was measured by the ballistic method with a ± 2% accuracy. The determined dependence of hardness, specific destruction work and coercive force on tempering temperature is discussed and illustrated in a set of three graphs (Fig. 1) (a - for Kh12; b - Kh12F; c - Kh12F1). The conclusion is drawn that dispersion hardening takes place in two grades, Kh12F within the 375 - 475°C range, and Kh12F1 within the 500 - 550°C range. A drop of dynamic strength is stated in same ranges. The growth of the coercive force at dispersion hardening temperatures indicates the formation of new carbide phases that are coherent with the mother metal. There is 1 set of diagrams and 2 references: 1 Soviet and 1 English.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

SUBMITTED: October 15, 1959

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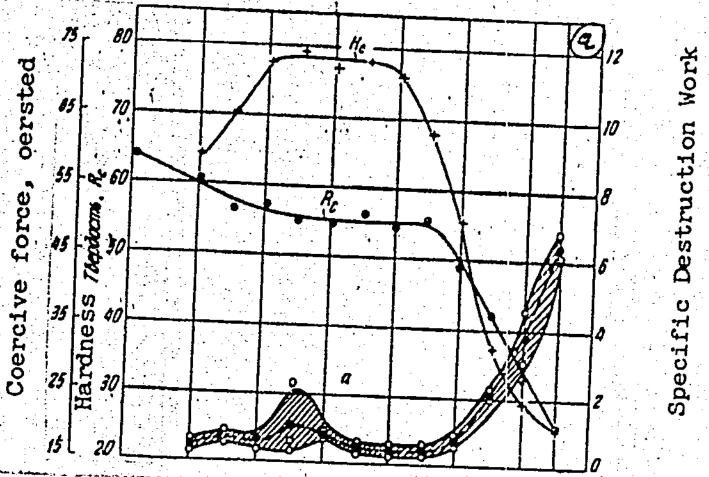
S/148/60/000/008/007/018
A161/A029

The Effect of Annealing Temperature on the Hardness and Specific DestructionWork in Kh12, Kh12F and Kh12F1 Steel

Figure 1. Dependence of the Hardness, Specific Destruction Work and Coercive Force on the Tempering Temperature.

a - Kh12 steel



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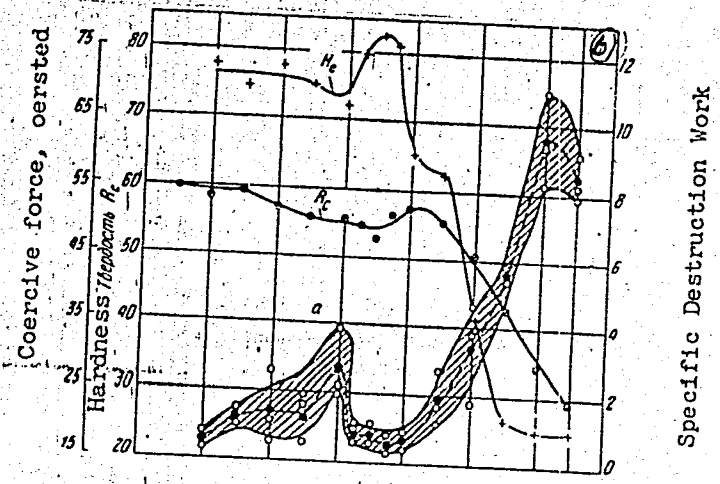
S/148/60/000/008/007/018
A161/A029

The Effect of Annealing Temperature on the Hardness and Specific Destruction Work in Kh12, Kh12F and Kh12F1 Steel

b - Kh12F steel



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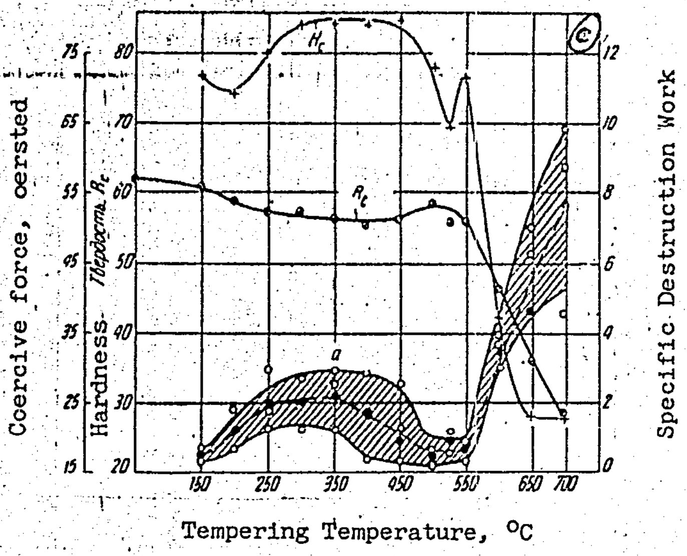
S/148/60/000/008/007/018
A161/A029

The Effect of Annealing Temperature on the Hardness and Specific Destruction Work in Kh12, Kh12F and Kh12F1 Steel

c - Kh12F1 steel



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L 41567-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) MJW/JD
ACCESSION NR: AP5001613 S/0279/64/000/006/0117/0124 24
B

AUTHOR: Polyakov, S. N. (Dnepropetrovsk); Kudlay, A. S. (Dnepropetrovsk)
18

TITLE: The connection between reversible temper brittleness and change in the properties of 30KhGSA steel during static strain

SOURCE: AN SSSR. Izvestiya. Metallurgiya i gornoye delo, no. 6, 1964, 117-124
18

TOPIC TAGS: reversible temper brittleness, mechanical property, dislocation theory, brittle fracture, strain hardening, age hardening/ 30KhGSA steel
18 18

ABSTRACT: The changes in the mechanical characteristics (tensile strength, ductility, relative elongation and contraction) of ductile and embrittled 30KhGSA steel were determined in the +200 to -140C temperature range. By analysis of the actual strain curves of the ductile and embrittled steel it was established that the brittle state is characterized by a high degree of blocking of the dislocations. A change in the parameters characteristic of the strain and age hardening processes occurred as the process of reversible temper brittleness developed. In the

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embrittled state, as compared to the ductile, the stress necessary for unblocking the dislocations increased, the coefficient of strain hardening was greater, the density of dislocations formed during plastic deformation was greater and the mobility of the free dislocations was greater. From the experimental data it was reasoned that the phenomenon of reversible temper brittleness should be considered from the standpoint of the dislocation theory of the brittle fracture of metals. Orig. art. has: 2 tables, 7 equations and 3 figures.

ASSOCIATION: None

SUBMITTED: 12Oct63 ENCL: 00 SUB CODE: MM

NR REF SOV: 009 OTHER: 010

Card 2/2

STARODUBOV, K.F., akad.; POLYAKOV, S.N., kand.tekhn.nauk

Optimum conditions for the thermal treatment of the blades of sectional plowshares. Trakt. i sel'khozmash. 30 no.8:42-44 Ag '60. (MIRA 13:8)

(Plows)

POLYAKOV, S.N. (Dnepropetrovsk); KUDLAV, A.S. (Dnepropetrovsk)

Relationship of reversible temper brittleness with changes in 30KhGSA steel properties during static tension. Izv. AN SSSR. Met. i gor. delo no.6:117-124 N-D '64. (MIRA 18:3)

POLYAKOV, S.N., kand.tekhn.nauk; SERDYUK, A.G., inzh.

Character of the structural state of grain boundaries in carbon steel following slow cooling in a subcritical temperature range. Trudy Inst.chern.met.AN USSR no.14:37-39 '61. (MIRA 14:10)
(Steel—Metallography)

STARODUBOV, K.F., akademik; POLYAKOV, S.N., kand.tekhn.nauk

Absence of a connection between the phenomena of the reduction of plastic properties of steel during tempering and reversible temper brittleness. Trudy Inst.chern.met.AN URSR no.14:11-14 '61.
(MIRA 14:10)

1. Akademiya nauk USSR (for Starodubov).
(Steel--Brittleness) (Plasticity)

POLYAKOV, S.N., kand.tekhn.nauk; GLIKMAN, Ye.E.

Investigating reversible temper brittleness in carbon steel by physical methods. Trudy Inst.chern.met.AN URSR no.14:15-23 '61.
(MIRA 14:10)

(Steel—Brittleness) (Phase rule and equilibrium)

POLYAKOV, S.N., kand.tekhn.nauk; KARP, S.F., inzh.; GLIKMAN, Ye.E.

Reversible temper brittleness of carbon steel with a varying silicon content. Trudy Inst.chern.met.AN URSR no.14:30-32 '61.
(MIRA 14:10)

(Steel--Brittleness) (Silicon)

POLYAKOV, S.N., kand.tekhn.nauk; YATSENKO, A.I., inzh.; KARP, S.F., inzh.

Effect of silicon on the reversible temper brittleness of steel.
Trudy Inst.chern.met.AN URSR no.14:24-29 '61. (MIRA 14:10)
(Steel--Brittleness) (Silicon)

POLYAKOV, S.N., kand.tekhn.nauk

Etching characteristics of grain boundaries during the development of reversible temper brittleness in carbon steel. Trudy Inst.chern. met.AN URSR no.14:33-36 '61. (MIRA 14:10)
(Steel—Metallography)

ZALKIND, N.G.; POLYAKOV, S.P.

Craniological material from medieval graves of southern and northwestern Turkmenistan. Biul.MOIP.Otd.biol. 67 no.5:154 S-O '62. (MIRA 15:10)

(TURKMENS--CRANIOLOGY)

YEMEL'YANOV, N.P., kand.tekhn.nauk; KLEMENTOV, V.I., kand.tekhn.nauk;
MAL'KOV, K.M., inzh.; TKACHENKO, F.S., inzh.; POLYAKOV, S.P.;
VEL'MIN, A.A., red.; ORLOVA, I.A., red.; MEDVEDEVA, M.A.,
tekhn.red.

[Multielectrode automatic built-up welding under flux]
Mnogoelektrodnaia avtomaticheskaia naplavka pod fliusom.
Moskva, Vses. Izdatel'sko-poligr. ob"edinenie M-va
putei soobshcheniia. 1962. 134 p. (Moscow, Vsesoiuznyi
nauchno-issledovatel'skii institut zheleznodorozhnogo
transporta. Trudy, no.239). (MIRA 15:11)
(Railroads--Maintenance and repair)
(Electric welding)

POLYAKOV, S.P., starshiy elektromekhanik telegrafa.

Automatic start and stop for the ST-35 telegraph apparatus.
Avtom.elem. i sviaz' no.7:30 Jl '57. (MLRA 10:8)

1.Upravleniye Tomskoy dorogi.
(Telegraph--Apparatus and supplies)

POLYAKOV, S. S.; SERGEYEV, Ye. M.

Water. Underground

Possibilities of freeing compound water from soils. Uch. zap. Mosk. un. No. 149, 1951.

9. **Monthly List of Russian Accessions**. Library of Congress, March 195~~3~~2. Unclassified.

USSR/Geophysics - Land improvement

Card 1/1	: Pub. 129-16/23	FD-1613
Author	: Sergeyev, Ye. M.; Polyakov, S.S.; and Kuprina, G. A.	
Title	: Improvement of sandy land by silt deposition from flood waters which erode denuded hills	
Periodical	: Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 8, 109-116, Dec 1954	
Abstract	: The author remarks that 'kolmatatsiya' (improvement of land by silt deposition) applied to sandy land is one of the most successful methods for decreasing their water permeability, as experimentally demonstrated by Ye. M. Sergeyev ("Role of chemico-mineralogical composition of material in the kolmatatsiya processing of sandy land," ibid. No 10, 1954). The authors discuss investigations conducted in the southern border of the sandy massif of Western Kara-Kumy in the region of Lake Chokrok (60 km northeast of the city of Kazandzhik) and Oraz-Kuym landmark (60 km north of the city of Kizyl-Arvat), Lake Chokrok being 8 square kilometers. They conclude that their results possess great practical significance for the creation of artificial reservoirs and impounds in the sandy foothills of the Kopet-Dag valley.	
Institution	: Chair of Ground Science	
Submitted	: September 14, 1954	

Polyakov S.S.

USSR/Geophysics - Geology expedition

Card 1/1 : Pub. 129-23/23

FD-1620

Author : Polyakov, S. S. (Leader of the Ob' Expedition)

Title : Works of the Geological Faculty in Western Siberia

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, 9, No 8, 146-147, Dec 1954

Abstract : In connection with the development of water power in the Ob' River Valley, the Geological Faculty of Moscow University in the summer of 1954 directed there a complex expedition consisting of three parties, each containing a professor, docent, scientific associates, assistants, aspirants, and students of the four chairs of the Geological Faculty (ground science and engineering geology; permafrost; historical and regional geology; geophysical methods of investigation of the terrestrial crust): Professors Ye. M. Sergeyev, V. A. Kudryavtsev; Docents V. V. Feniksova, A. A. Ogil'vi, N. F. Poltev, B. N. Dostavalov, B. A. Savel'yev; etc.

Institution : -

Submitted : -

POLYAKOV, S.S.

Composition and properties of moraine deposits in Moscow Province. Uch.zap.Mosk.un. no.177:61-84 '56.
(Moscow Province--Moraines) (MLRA 10:5)

POLYAKOV, S.S.; TROFIMOV, V.T., aspirant

Composition and properties of Middle Quaternary moraine formations in the western part of the West Siberian Plain. Izv. vys. ucheb. zav.; geol. i razv. 7 no.6:107-112 Je '64. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

TROFIMOV, V.T.; POLYAKOV, S.S.

Characteristics of the Middle Quaternary fluvioglacial sediments in the western part of the West Siberian Plain. Vest. Mosk. un. Ser. 4: Geol. 19 no.3:89-97 My-Je '64.

(MIRA 17:12)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.

MOROZOV, S.S.; POLYAKOV, S.S.; TERESHKOV, G.M.

Soils of the central Khanty-Mansi National Area. Pochvovedenie no.12:18-28 D '61. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Khanty-Mansi National Area--Soils)

POLYAKOV, S.S.

Composition and properties of loam and clay in Moscow Province (in the environs of Moscow). Zemlevedenie 5:71-98 '60. (MIRA 15:8)

(Moscow Province--Clay) (Moscow Province--Loam soils)

POLYAKOV, S.S.

Natural zoning of the lower Ob" Valley. Vest.Mosk. un. Ser. 5: Geog. 17 no.2:25-31 Mr-Ap '62. (MIRA 15:5)

1. Kafedra gruntovedeniya i inzhenernoy geologii, geologicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta.

(Ob' Valley--Physical geography)

SERGEYEV, YE. M.; POLYAKOV, S. S.

Soils

Possibilities of freeing compound water from soils., Uch. zap. Mosk. un., no. 149, 1951

9. **Monthly List of Russian Accessions**, Library of Congress, March 1952, Unclassified.

POLYAKOV, S.S.; SERGEYEV, Ye.M.

Characteristics of the lower Ob' Valley from the viewpoint of engineering geology. Nauch.dokl.vys.shkoly; geol.-geog.nauki no.1:124-132 '58. (MIRA 12:2)

1. Moskovskiy universitet, geologicheskiy fakul'tet, kafedra gruntovedeniya i inzhenernoy geologii.
(Ob' Valley--Geology)